UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/468,290	06/06/95	COLLINS	R [redacted]

EXAMINER
JOHNSON, T

E6M1/1101

ART UNIT: 2616 | PAPER NUMBER: 6

[redacted]
FISH AND RICHARDSON
225 FRANKLIN STREET
SUITE 3100
BOSTON MA 02110-2804

DATE MAILED: 11/01/96

RECEIVED
NOV 06 1996
FISH & RICHARDSON P.C.
BOSTON, MA

RECEIVED
NOV 7 1996

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

DAVID L. FEIGENBAUM

OFFICE ACTION SUMMARY

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), ~~or thirty days, whichever is longer~~, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☑ Claim(s) 1-33 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☑ Claim(s) 1-33 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Docketed By Practice Systems
Action Code: 3m Action
Base Date: 11-1-96
Due Date: 2-1-97
Deadline: 5-1-97
Initials: Amm
Record: 9-12-97

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Docketed By Billing Secretary
Due Date: 2/1/97
Deadline: 8/1/98
Initials: [illegible]

Attachment(s)

☐ Notice of Reference Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

– SEE OFFICE ACTION ON THE FOLLOWING PAGES –

Part III Detailed Action

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

2. Claim 32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 32 recites the limitation said extracting in the second line of claim 32. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 1-3 are rejected under 35 U.S.C. 103 as being unpatentable over Leach.

For claim 1, Leach provides for compressing an image having at least three textures as shown in Fig. 4, and compression is provided, since codes are used for colors as noted in col. 6, lines 17-19. A generated boundary map separating regions is provided as shown in Fig. 4. Associating regions with textures is provided as shown in Figs. 4 and 5, and as noted in col. 9, lines 5-13, and generating pointers is at least obviously, if not inherently provided, since pointers are variables that contain the address of some data, and where the data in this case is texture (colors) which is variably addressable in registers (addressable memory) by a color palette.

For claim 2, a bitmap is provided for in col. 5, lines 42-43. The boundaries comprise pixels of a first value, and the regions comprise other values as provided by example in Figs. 4 and 5.

For claim 3, assigning codes to textures is provided for by color codes in col. 6, lines 17-19, and in Fig. 11a, where color may be construed as texture - specification page 2, line 22.

6. Claims 1-11, 14-19, 22-23, 27-28, 31, and 33 are rejected under 35 U.S.C. 103 as being unpatentable over Murata et al.

For claim 1, compressing an image is provided for, since codes are used for characters and color - col. 30, lines 35-40. A form of compression is also provided for in col. 30, lines 50-52. At least three textures are provided for as shown in Fig. 11 by trees, a brick road, grass, roof tops, etc., and as noted in col. 21, lines 1-11. Generating a boundary map separating regions is shown in Fig. 11. Associating regions with textures is also shown in Fig. 11, and generating pointers for the association is provided in col. 21, lines 20-29, where it is at least obvious, if not inherent that pointers are used, since pointers are variables that contain the address of some data, where in this case the data is texture, and where texture information is written into a buffer which inherently has addresses, and where it is at least obvious if not inherent that this texture data is pointed to by other variables - col. 20, lines 58-62, and where it is further noted that pointers and data structures are conventional codes in a programming language such as "C".

For claim 2, a bitmap is at least obviously, if not inherently provided for in col. 18, lines 20-22, since a one-to-one correspondence between display dots (i.e. pixels) and storage areas (implying bits) is the definition of a bit-map. The boundaries comprise pixels of a first value, and the regions comprise other values as provided by example in Figs. 11-13 and 39-40.

For claim 3, assigning codes to textures is provided in col. 18, lines 44-49, providing for color codes, where color may be construed as texture - specification page 2, line 22, and Murata further provides for bits for texture which can mean codes for texture in col. 22, lines 52-58, and for character codes in col. 30, lines 35-48.

For claim 4, each pointer includes a code as noted above for claim 1, since color codes are "pointed" to by variables where the address is provided by the texture coordinates - col. 20, lines 58-62.

For claims 5 and 6, each pointer includes a location which is a single location in regions, since the pointers noted for claim 4 above are those of coordinates - col. 20, lines 58-62.

For claims 7 and 8, each region comprises a single texture; and the boundaries comprise a first texture as shown in Figs. 11-13 and 39-40 for example.

For claim 9, converting each pixel not of first texture (i.e. regions) to a second texture is provided as shown for example in Figs. 2A, 2B, 10, 11-13 and 39-40, and as noted in col. 14, lines 25-28 for example.

For claim 10, generating pointers comprising finding a location in each region which is not second texture Is provided for in at least two different ways: 1. As shown in Figs. 11 and 12, there are a plurality of textures, so that the pointers will contain addresses (which is what pointers do) of the texture data. See above argument for claim 1; and 2. Blocks 830 and 832 of Figs. 29B and 33B provide for other forms of texture as color and bumps whose data are kept track of by variable coordinates, obviously or inherently providing for pointers as well as a plurality of coordinates.

For claim 11, see claim 2 above.

For claim 14, see above for claims 1-5 and 9.

For claim 15, see above for claim 1, and note that a data structure is at least obviously if not inherently provided by at least the attribute data and the coordinate data for example in col. 16, lines 54-61, and where it is noted that pointers and data structures are conventional codes in a programming language such as "C".

For claim 16, see above for claim 3, and see block S70 and S73 in Fig. 9B as an example.

For claim 17, see above for claims 3-5.

For claim 18, see above for claims 4 and 6.

For claim 19, see above for claim 11.

For claim 22, the invention of Murata may be considered decompressing an image having at least three textures, since color codes for example are used to make an image on a CRT as shown in Fig. 9B, and where at least three textures are provided in Figs. 11 and 12. At the least, Murata may be used in a decompression stage. For a region boundary map and a pointer determining textures associated with regions is provided for above in claim 1. Filling a region with texture is provided in col. 18, lines 50-56.

For claim 23, a bitmap is at least obviously, if not inherently provided for in col. 17, lines 62-66, where it is implied that dots (pixels) are in bitmap form since other data such as color has not yet been rendered, and in col. 18, lines 7-11 and 20-22, since a one-to-one correspondence between display dots (i.e. pixels) and storage areas (implying bits) is the definition of a bit-map.

For claim 27, filling comprises referencing a pointer to determine a location is at least functionally provided by coordinate variables which inherently have addresses of texture data in col. 18, lines 20-34 for example. Converting regions into textures is provided in col. 18, lines 35-56.

For claim 28, filling comprises determining a function associated with texture(s) is provided in col. 18, lines 35-43, and converting each pixel into a color(s) is provided in col. 18, lines 44-49.

For claim 31, see above rejections for claim 22, and further note that a display is provided for as a CRT as block 46 in Fig. 1B, and overlaying an image on a background is provided as shown in Figs. 10-12.

For claim 33, see above for claims 1 and 31.

7. Claims 12-13, 20-21, and 24-26 are rejected under 35 U.S.C. 103 as being unpatentable over Murata et al. in view of Snyder et al. or Golin et al.

For claims 12 and 13, Murata does not provide for run-length-encoding (RLE) the map. Snyder provides for RLE for digital images as noted in the abstract, lines 1-3. Snyder also notes that it is conventional to produce bit-map images in col. 1, lines 13-17. Snyder further provides for RLE pictures (i.e. images) in col. 2, lines 46-50. It would have been obvious to one having ordinary skill in the art at the time the invention was made to run-length-encode the bit-maps of

Murata, since encoding or compression is well known and desirable for conserving memory as noted by Murata in col. 2, lines 21-24.

For claims 12 and 13, Murata does not provide for run-length-encoding (RLE) the map. Golin provides for variable length coding as noted in the abstract, lines 13-16, for image regions. Run-length-encoding is variable length coding, because the run-lengths of bits or data are variable. Golin further provides for an encoded a bit-map image as shown in block 4826 (which is going to be decoded) of Fig. 48 as noted in col. 39, lines 33-37. It would have been obvious to one having ordinary skill in the art at the time the invention was made to run-length-encode the bit-map of Murata, since it is well known that encoding conserves memory, and Golin provides the advantage of optimum coding specific to each region - col. 1, line 65 - col. 2, line 2.

For claims 20 and 21, see above for claims 12 and 13.

For claims 24 and 25, Murata does not provided for run-length-decoding. Golin provides for variable length decoding as noted in the last ten lines of the abstract, where variable-length-decoding is run-length-decoding (see above for claims 12 and 13 for Golin). Golin further provides for decoding a bit-map image as shown in block 4828 of Fig. 48 as noted in col. 39, lines 33-49. It would have been obvious to one having ordinary skill in the art at the time the invention was made to run-length-decode the bit-map of Murata, since otherwise the encoded image can not be displayed.

For claim 26, converting to multiple bits per pixel is provided by Murata in col. 17, lines 62-66 where the process of "painting" dots means that a pixel will have multiple bits associated with it as necessitated by coloring.

8. Claims 29 and 30 are rejected under 35 U.S.C. 103 as being unpatentable over Murata et al. in view of Foley et al.

For claims 29 and 30, Murata at least obviously if not inherently provides for seed filling, since seed filling can mean starting the fill from a pixel within a boundary defined region - lines 8-10 on page 980 of Foley, where Murata provides for a boundary defined region as shown in Figs. 10 A- K and each polygon region of Murata is processed separately - col. 19, lines 54-57, col. 20, lines 5-12 and lines 58-68, with reference to Figs. 1B and 10I, 10J, and 10K, where it is seen that

the filling is deterministic, where filling is commenced at the determined location defined by the functions and by scanning - col. 19, line 67 - col. 20, line 4. Since Murata does not explicitly provide for seed filling, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use one of the seed filling algorithms of Foley, since Foley provides for efficient region filling in the second paragraph under "The Basic Filling Algorithms" on page 980.

9. Claim 32 is rejected under 35 U.S.C. 103 as being unpatentable over Murata et al. in view of Snyder et al.

As best understood for claim 32 (see 112/2 rejection above), Murata provides for filling and overlaying as noted above for claim 31, but does not provide for repeating this to create motion. Snyder provides for motion and using color codes to fill in col. 9, lines 12-36 and especially lines 30-33, and an overlaid background is provided in col. 6, lines 19-32, as provided by block 130 in Fig. 3, and a background is explicitly mentioned in col. 4, lines 44-53. It would have been obvious to one having ordinary skill in the art at the time the invention was made to repeat the filling and background overlaying steps, since it is well known to provide for motion, such as in video games - col. 5, line 55 - col. 6, line 3.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamura, 4,951,038, provides for displaying a moving sprite -abstract, last sentence.

Ueda, 4,935,879, provides for animation in the abstract and different textures in Fig. 7.

Robinson, 4,855,934, provides for a boundary map and textures in the abstract.

Chan et al., 4,729,127, provides for data compression for a moving map display in the abstract.

Doyle, 4,847,604, provides for a bit map, a color map, and pointing to a feature location - abstract.

Sato, 5,475,809, provides for a coded pattern, edge lines, and filling - abstract.

Miner et al., 5,103,499, provides for a bitmap, backgrounds, and movable sprites - abstract.

Contact Information

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy M. Johnson whose telephone number is (703) 306-3096.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-8576.

The Group Art Unit FAX number is (703) 308-5397.

TJ

Timothy M. Johnson
Patent Examiner
Group Art Unit 2616
October 27, 1996